



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, ILLINOIS 60604**

SUBJECT: CLEAN AIR ACT INSPECTION REPORT
Northland Aluminum, St. Louis Park, Minnesota

FROM: Emma Leeds, Environmental Engineer
AECAB (IL/IN)

THRU: Nathan Frank, Section Supervisor
AECAB (IL/IN)

TO: File

BASIC INFORMATION

Facility Name: Northland Aluminum Products (Northland Aluminum)

Facility Location: 4925 County Road/Highway 7, St. Louis Park, MN 55416

Date of Inspection: July 12th, 2022

EPA Inspector(s):

1. Emma Leeds, Environmental Engineer
2. Brianna Fenzl, Environmental Engineer

Other Attendees:

1. Tim Hutchings, Maintenance and Electrical Manager – Northland Aluminum
2. Dave Madden, Vice President of Manufacturing – Northland Aluminum
3. Shawn Macinnis, Environmental Health and Safety Manager – Northland Aluminum

Contact Email Address: shawnmacinnis@nordicware.com

Purpose of Inspection: To investigate compliance with the Clean Air Act and applicable National Emission Standards of Hazardous Air Pollutants (NESHAP)

Facility Type: Metal and plastic cookware and bakeware manufacturing

Regulations Central to Inspection: NESHAP Subpart Mmmm: Surface Coating of Miscellaneous Metal Parts and Products; NESHAP Subpart Pppp: Surface Coating of Plastic Parts and Products; NESHAP Subpart Wwww: Reinforced Plastic Composites Production.

Arrival Time: 1:10 PM

Departure Time: 3:10 PM

Inspection Type:

- ☒ Unannounced Inspection
- ☐ Announced Inspection

OPENING CONFERENCE

- ☒ Presented Credentials
- ☒ Stated authority and purpose of inspection
- ☒ Small Business Resource Information Sheet not provided. Reason: Not a small business
- ☒ Provided CBI warning to facility

The following information was obtained verbally from Northland Aluminum unless otherwise noted.

Process Description:

Northland Aluminum creates cooking and bakeware through a series of production departments, including metal fabrication, molding, coating and washing, packing, and shipping. In the metal fabrication process, aluminum and steel coils are pressed to form the product, and then grinded and sanded. Some cast aluminum pans are produced off site and only grinded and sanded at the facility. Next, in the molding process, pelletized plastics are heated, pressurized, and molded in either an injection mold press or a compression mold press, and then applied to the formed metal part. In the coating process, twelve automated booths and five manual booths are used to apply solvent-based and water-based coatings to the products, often including a high heat enamel coating to create a non-stick surface. Lastly, final products are packed and shipped.

Staff Interview:

Northland Aluminum operates 5 days a week, with the metal fabrication department operating 24 hours a day and all other departments operating 16 hours a day. The facility has been open since the 1950's and has around 400 employees.

The coating process is the main source of emissions. Each coating booth has fabric filters that are monitored for differential pressure and changed at 0.5 inches of water column, typically once a day. Each booth has an air curtain but is not monitored for negative pressure in the booth. Coating emissions are calculated using emission factors from the suppliers. The facility has a coating production rate limit of 600 pounds of solid coatings per day to limit particulate matter emissions.

Polypropylene and polyester plastics are molded in the injection mold press while polystyrene, phenolic, and polyethylene plastics are molded in the compression mold press. Northland Aluminum also tracks and calculates volatile organic compound (VOC) and hazardous air pollutant (HAP) emissions from the compression mold process using a data system. Emissions

from the polystyrene molding are calculated based off the manufacturer's data for the percent of styrene released in the molding process.

TOUR INFORMATION

EPA Tour of the Facility: Yes

Data Collected and Observations:

EPA first observed a vibrating tumbler machine that uses ceramic media to knock edges off cast iron products. Dust from the vibrating tumbler machine goes through a water bath and filtration before it is deposited. Next, EPA observed the automatic and grit blasting operations, which use aluminum oxide as the abrasive material. Emissions from the blasting operations are controlled by a baghouse. EPA then observed a new washer machine that was installed in December 2021 but hasn't started operating yet because Northland Aluminum is waiting for an approval from Minnesota Pollution Control Agency (MPCA).

EPA walked through the two coating buildings. Both buildings have multiple automatic lines with coating booths and ovens. An auto-lock system shuts the automatic lines down when the pressure drop across the coating booth filters reaches 0.7 inches of water column. Northland Aluminum shared that they occasionally coat products for outside companies.

Lastly, EPA observed the ten compression mold presses. Only one of the compression mold presses is used for phenolic plastics and it does not have a hood. The nine other molding presses each have their own hood, and all vent to one emission point on the roof. EPA then observed the two injection mold presses, which heat plastics to 450 degrees Fahrenheit as part of the process.

Photos and/or Videos: were taken during the inspection.

CLOSING CONFERENCE

☒ Provided U.S. EPA point of contact to the facility

Requested documents:

- Air Emission Reports for 2019 – 2021, including associated calculation spreadsheets
- 2018 Part 70 Permit including major amendment application for new washer
- 2019 MPCA Schedule of Compliance
- Polystyrene and phenol usage records
- Notice of Compliance Status reports for NESHAP Subparts MMMM, PPPP, and WWWW

DIGITAL SIGNATURES

Report Author: _____

Section Supervisor: _____

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APPENDICES AND ATTACHMENTS

- 1.* Appendix A: Digital Image Log

Facility Name: Northland Aluminum Products

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Date of Inspection: July 12, 2022

APPENDIX A: DIGITAL IMAGE LOG

1. Inspector Name: Brianna Fenzl	2. Archival Record Location: <i>C:\Users\bfezl\OneDrive - Environmental Protection Agency (EPA)\Minneapolis Inspection Trip</i>
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Image Number	File Name	Date	Description of Image
1	IMG_0114.JPG	7/12/22	Vibrating tumbler machine
2	IMG_0115.JPG	7/12/22	Spray booths
3	IMG_0116.JPG	7/12/22	Automated spray booth (EQU19)
4	IMG_0117.JPG	7/12/22	Compression molding in process

Note: All photos were taken from 2:00 – 3:00 PM EST.